UGI Development Company
Hunlock Power Station
Plan Approval No. 40-328-006

May 4, 2009 Comments:

Section A: Plan Approval Inventory List

Table on Page 4 identifies steam boiler as 50 MMBtu/hr. The package boiler should be rated at < 50MMBtu/hr.

Section C: Site Level Plan Approval Requirements

Condition #007 – The ERCs match the 9/3/08 ERC submittal. UGI did generate PM2.5 credits and I believe it should be included here. PM2.5 was based on the methodology for the annual emissions statement which assumes that PM2.5 is a percentage of PM10.

Condition #013 – Requires weekly inspections for odors beyond the fence line while the source is in operation. UGI personnel will perform weekly inspections to determine if any odors are beyond the boundary of the facility.

Condition #015 – Contains CEMs requirements NOx, CO, O2/CO2 and NH3. There is an allowance to suggest an alternative method for demonstrating compliance with the ammonia slip limit (10 ppm). Typically inlet/outlet NOx and ammonia flow rate are measured and a formula is used to estimate ammonia slip. This can be done by the CEMs monitoring software.

OK

Check Use most be latest

Condition #019 – Item "c" requires recordkeeping of hours in "peak mode". Should this state Duct Firing.

Done

Condition #021 – Contains a LAER NNSR requirement to maintain records of natural gas availability. Since we net out of NNSR this should be deleted.

Condition #025 – The ERC requirements are too high. To net out of reviews all that we need are: NOx 28 tpy, TSP/PM 17 tpy, PM10 47 tpy, H2SO4 3.5 tpy. Anything above and beyond these amounts are excess for banking but not netting/compliance with PSD or NNSR. In this section all that should be included is the amounts required to net out of these reviews.

Section D: Source Level Plan Approval Requirements
Source ID: 035

Source name should be ~~< 50~~ MMBtu/hr Boiler.

49.9

Condition #007 – Requires no later than 180 days after initial startup, the permittee shall demonstrate compliance with the emission limitations for NOx and CO established in **Conditions 17** for each Boiler. **What is condition 17?**

Condition #007 – Requires either a compliance stack test or submittal of recent data from identical unit(s). UGI will contact boiler manufacturer to obtain appropriate stack test for Source 035.

EPA Revised
Comments on Proposed Plan Approval
40-328-006 for UGI Development

Response to August 4, 2009 Response

1. Assuming the electricity or steam from Units 1-3 and Unit 4 is not sent to a common source, these Units do appear to be separate facilities under Title V.
2. While this does clarify our previous question, the NSPS includes no exemption for startup, shutdown, or malfunction and, requires good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction (40CFR 60.4333). Thus, condition #007 for Section E, source Group 1 should be removed.
3. Response is considered complete.
4. Response is correct, our comments were incorrect.
5. The revised table answers our question.
6. Information provided for question #3 answers our question.
7. Response is accepted. Subpart YYYY should be included in the Permit Review Memo with a similar explanation as to why it does not currently apply.

Additional Comments

Permit Review Memo

Page 9 - Par 3, it appears that "Unit #6" in this paragraph should be replaced with "Unit #3." Revised

NSPS Subpart Kb – No reference to this requirement is included in the Review Memo, yet the permit includes numerous Kb requirements. Is Subpart Kb actually applicable? If so, the Permit Review memo should discuss it and why it applies. If not, the requirements that are listed in the permit should be removed. Revise

Proposed Plan

1. VE testing - The Proposed Plan lists two different and inconsistent opacity measuring limits; See Section C Condition #014 and Section E, Source Group 1, Condition #003. Section C - #14 - Monitoring Method
   Section E - Group 1 - #3 Limitation
2. Recordkeeping – How are the records of monthly emissions listed in Section C, Condition #019 to be generated? NSPS KKKK monitoring and recordkeeping requirements only cover NOx and SO_2. Facility To ~~Monitor~~ use Emission Data From CEM's ~~&~~ Testing Data To Calculate Emission on Monthly Basis
3. General Permit – Section D, 49.9 MM BTU/Hr Boiler – Specific citations for the General Permit should be included for each applicable requirement listed in this Section. Inapplicable parts of the General Permit should not be included, such as:
   a. Condition #001, par 3 references to permits other than Title V,

Removed General Permit Language From Conditions Pertaining To 49.9 mmBtu Boiler

b. Condition #002 last sentence, and
c. Condition #013 in entirety.

Condition #003 is a Recordkeeping/Reporting Requirement and should be moved to one or both of those sections
Condition #006 refers to Condition #017 for each boiler. Where is this condition?

4. Section D, 500,000 gal distillate fuel tank - Even if NSPS Subpart Kb applies, Condition #006 should be deleted as it is not a permit condition. Removed Condition

5. Section E, Source Group Combustion Turbines w HRSG, Condition #015 – Please identify the units to which this condition applies. Removed Condition Does Not Apply

6. Section E, Subpart KKKK Turbine NSPS - Inapplicable parts of this NSPS should be removed. For example:
   a. Condition #001 – last three paragraphs Done
   b. Condition #003 – two paragraphs that apply to turbines with NOx standard >15ppm Done

   Condition #002 should be moved to the Monitoring Section. Done
   Condition #008, last paragraph (b) – Please identify which units may be covered.

Truncated To Fit

Page 1 Description
- - Insert "nominal" before 50 MW
- - Insert "supplementary fired" before heat recovery
- - Insert "Oxidation" before Catalyst

Page 5 Equipment List and Permit Maps CT5 and CT6 – Do not recognize supplementary-fired HRSG
- Insert "supplementary fired" before HRSG
- Modify Capacity/Throughput as follows:
  - Either insert "Combustion Turbine" after 471,2000 cf/hr and add "38,900 cf/hr Duct Burner and a new line, or
  - Change 471,200 to 510,100 to reflect both combustion turbine and duct burner which is natural gas only, or
  - Create new combustion units for HRSG duct burners C07, C08 with capacity of 38.9 MMBtu/hr

2000 hrs

Page 13 Section C. #010 (a)(1) – typographical error change "nay" to "any"

Page 15 Section C #019 (f) – requires a reference section for the cited Condition

Did Not Site Condition # as They Claim

Page 15 Section C #020 (b) – Delete reference to "two cooling towers"

Page 16 Section C #021 (b) – Delete this requirement. The project is not subject to the provisions of 25 PA Code Section 127.12b, therefore, usage of distillate fuel oil is not contingent upon natural gas shortage.

Page 17 Section C #025 – Delete reference to "two cooling towers"

Page 17 Section C #028 – Modify required ERCs as follows:
- NOx = 7.0 tpy
- H2SO4 = 2.0 tpy
- SO2 = 0.0 tpy
- PM10 = 58.0 tpy

These are the minimum amounts required for netting purposes.

Halchak, Brian

From: Duke.Gerallyn@epamail.epa.gov
Sent: Monday, July 13, 2009 3:52 PM
To: Halchak, Brian
Subject: Comments on Proposed Plan Approval for UGI Development Company

Hello Brian. Below are my comments on Proposed Plan Approval 40-328-006.

1. Is Unit 4 part of the facility for title V purposes? If so, should netting be needed, Unit 4 should be included in the analysis. If not, I'd appreciate learning why PADEP determined these are separate facilities and not "units under common control".

2. Page 7 of the draft Review Memo, bullet three states that avoided emissions are greater than startup/shutdown emissons. Can you please clarify that in light of the preceding bullet on page 7?

3. Please provide baseline actual emissions for NOx and VOCs that were used to calculate the increases listed on page 8 of your review memo. Am I correct in understanding that the PTE for the Project will be 46.8 for NOx and 9.608 for VOC?

4. A PSD analysis would not be needed in this case for NOx and VOC, as these are subject to an NSR applicability determination. A (1) should be included in the last column on the table on page 10 for NOx, or, even better, the rows for NOx and VOCs should be omitted.

5. Are the "Project Emission Increases" for NOx and VOCs listed on page 10 of the Permit Review Memo not the same as those listed on page 8 because Unit 6 is included in the netting but not the determination of increase? Please explain why these emissions are not the same and note that the same "increase" determined in Step 1 should be used in Step 2, from which contemporaneous increases and decreases are added/subtracted to produce a net emissions increase/decrease.

6. Please provide the details on the contemporaneous increases and decreases that are summarized on page 10 of the Permit Review Memo.

7. Have you fully evaluated EPA's March 16, 1995, "Potential to Emit for MACT Standards-Guidance on Timing Issues", which is also known as the "Once In Always In" policy, in the context of whether 40 CFR Subpart YYYY applies? This policy clarifies that facilities that are major sources of HAPs on the first compliance date of the standard must comply permanently with the MACT standard to ensure that maximum achievable reductions in toxic emissions are achieved and maintained. We can discuss this further after checking the Title V Policy & Guidance Database.

As always, please contact me with any questions or concerns. Thank you for this opportunity to comment. I look forward to your response.

Gerallyn Duke
EPA Region III 3AP11
1650 Arch Street
Philadelphia, PA 19103
215-814-2084

MMcshaw@GASMARK.COM

1. Is Unit 4 part of the facility for title V purposes? If so, should netting be needed, Unit 4 should be included in the analysis. If not, I'd appreciate learning why PADEP determined these are separate facilities and not "units under common control".

UGI Response

Unit 4 is not part of the UGI Hunlock Creek Title V permit. Unit 4 is owned and operated by Allegheny Energy. Allegheny Energy leases the land from UGI occupied Unit 4. UGI exercises no control over the operation of Unit 4.

2. Page 7 of the draft Review Memo, bullet three states that avoided emissions are greater than startup/shutdown emissions. Can you please clarify that in light of the preceding bullet on page 7 "While unit emissions rates (lb/mmBtu) are higher at part load, total emissions (lb/hr) are lower for all criteria pollutants".

UGI Response

During unit startup and shutdown the instantaneous emission rates for certain pollutants will be higher than during steady state normal operations. A typical startup, defined as from initial fuel firing to combustion turbine steady state operation (approximately 50% load), is expected to take approximately 1 hour while a typical shutdown, defined as from when steady state combustion turbine operating load falls below normal operations to cessation of fuel firing, is expected to take approximately 30 minutes. These times, especially the startup time, will mostly be a function of how long the unit has been down. The project will be dispatched based on the electric needs of the grid. Typical minimum down times between unit operations is expected to be 4-8 hours during peak electric demand periods. The avoided emissions, i.e., the emissions that would have occurred had the unit been operating are greater than the elevated emissions due to unit startup/shutdown. Therefore for the calculation of annual potential to emit the worst-case is unit operations at full load for 8,760 hours per year.

When the unit is operating at less than full load, but not in a startup or shutdown condition, some emissions when expressed as pounds per million BTUs (lbs/mmBtu) may be higher at part load than at full load. Since the heat input rate at part load is less than at full load the actual amount of emissions in pounds per hour (lbs/hr) will always be greater at full load than at partial load.

3. Please provide baseline actual emissions for NOx and VOCs that were used to calculate the increases listed on page 8 of your review memo. Am I correct in understanding that the PTE for the Project will be 46.8 for NOx and 9.608 for VOC?

UGI Response

The Boiler #6 historical emissions are provided in the table below. The Emissions Reduction Credit (ERC) application was filed in September 2008. The Project PTE is 46.8 tpy for NO_x and 9.608 tpy for VOC.

Boiler #6 Historical Emission (tpy)

Pollutant	*2007*	*2006*	*2005*	*2004*	*2003*	*2006-2007 Average*
SO_2	3,586.0	4,405.0	4,482.0	3,657.0	3,270.2	3995.5
NO_x	558.0	493.9	451.2	552.2	425.3	526.0
PM_{10}	277.9	278.8	266.0	293.6	243.8	278.4
$PM_{2.5}$	238.7	238.6				238.2
CO	48.70	42.21	41.91	45.61	41.41	45.46
VOC	5.71	5.20	5.41	5.71	4.92	5.46
Pb	0.0090	0.0200	0.0200	0.0200	0.0100	0.01
H_2SO_4	3.65	3.75	3.50	3.74	3.38	3.70

4. A PSD analysis would not be needed in this case for NOx and VOC, as these are subject to an NSR applicability determination. A (1) should be included in the last column on the table on page 10 for NOx, or, even better, the rows for NOx and VOCs should be omitted.

UGI Response

A PSD analysis is required for NO_x as NO_x is a criteria pollutant unto itself and the area is designated as attainment for NO_x. NO_x is also a precursor for ozone and since the area is designated as nonattainment for ozone a nonattainment new source review analysis is required for NO_x. VOC does not have this dual pollutant identify, therefore, only a nonattainment new source review analysis is required under the ozone nonattainment area status.

5. Are the "Project Emission Increases" for NOx and VOCs listed on page 10 of the Permit Review Memo not the same as those listed on page 8 because Unit 6 is included in the netting but not the determination of increase? Please explain why these emissions are not the same and note that the same "increase" determined in Step 1 should be used in Step 2, from which contemporaneous increases and decreases are added/subtracted to produce a net emissions increase/decrease.

UGI Response

The table on page 10 was copied from the original permit application submitted in 2007 and is now out of date. A revised table is provided below based on the emission rates as agreed upon in the draft plan approval and revised Boiler #6 net emission decreases based on actual emissions data from 2006-2007. The most recent Boiler #6 net emissions decreases are provided in the response to Question #3.

Summary of PSD Netting Analysis

Pollutant	*PSD Significant Emission Rate (tpy)*	*Project Emission Increases (tpy)*	*Boiler #6 Emission Decrease (tpy)*	*Net Emissions Increase (Decrease) (tpy)*	*PSD Modification*
Carbon Monoxide	100	34.4	45.5	-11.1	No
Nitrogen Oxides	40	46.8	526.0	-479.2	No
Sulfur Dioxide (SO2)	40	25.6	3995.5	-3969.9	No
Particulate Matter (TSP/PM)	25	42.3	17.2	24.6	No
PM10	15	72.9	278.4	-204.5	No
PM2.5	10	72.9	238.2	-165.3	No
Ozone (Volatile Organic Compounds)	40	9.6	5.5	4.1	(1)
Lead	0.6	0.002	0.019	-0.017	No
Asbestos	0.007	NA			No
Beryllium	0.0004	0.00004			No
Mercury	0.1	0.0002			No
Vinyl Chloride	1	NA			No
Fluorides	3	NA			No
Sulfuric Acid Mist	7	8.7	3.7	5.0	No
Hydrogen Sulfide	10	NA			No
Total Reduced Sulfur Compounds	10	NA			No
(1) Area is designated as nonattainment for ozone; therefore, PSD is not applicable to this pollutant.					

6. Please provide the details on the contemporaneous increases and decreases that are summarized on page 10 of the Permit Review Memo.

UGI Response

The most recent Boiler #6 net emissions decreases are provided in the response to Question #3.

7. Have you fully evaluated EPA's March 16, 1995, "Potential to Emit for MACT Standards-Guidance on Timing Issues", which is also known as the "Once In Always In" policy, in the context of whether 40 CFR Subpart YYYY applies? This policy clarifies that facilities that are major sources of HAPs on the first compliance date of the standard must comply permanently with the MACT standard to ensure that maximum achievable reductions in toxic emissions are achieved and maintained. We can discuss this further after checking the Title V Policy & Guidance Database.

UGI Response

The referenced EPA guidance memo states that facilities may switch to area source status at any time until the "first compliance date" of the standard. For new sources (i.e., the proposed combustion turbine) this date is either upon startup or no later than the promulgation date of the standard, whichever is later. For the proposed project the compliance date would be the startup date. Boiler #6 will be shut down prior to the startup of the new unit. This requirement will be federally enforceable and is contained within the draft Plan Approval. Once Boiler #6 is shutdown the facility PTE will be less than the 10/25 tpy HAP major source thresholds and the facility would qualify for area source status per the referenced guidance memo. Based on the example under the section "Applicability of Multiple MACT Standards to a Single Facility" in the guidance memo it would appear that the guidance indicates that the combustion turbine MACT standard would not apply as the facility would have switched to area source status prior to the applicability of subpart YYYY.

Regardless of the above, on August 18, 2004 (Federal Register / Vol. 69, No. 159) EPA stayed the effectiveness of the Subpart YYYY requirements for stationary lean premix and diffusion flame combustion turbines firing gas and when all turbines fire oil no more than 1,000 hours annually. The proposed combustion turbine is limited to the fuel equivalent of 600 hours per year at full load. The stay suspended the requirements to apply pollution controls and associated operating, monitoring, and reporting requirements for these source types. These source types must still comply with the Initial Notification requirements set forth in § 63.6145 but need not comply with any other requirement of subpart YYYY.